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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,389	08/05/2003	Tony Gichuhi	5348/55547	6519

7590 05/17/2006

Timothy T. Patula
Patula & Associates, P.C.
14th Floor
116 S. Michigan Avenue
Chicago, IL 60603

EXAMINER	
DELCOTTO, GREGORY R	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/634,389	GICHUHI ET AL.	
	Examiner	Art Unit	
	Gregory R. Del Cotto	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-10,17,19-28 and 30-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *1,3,5-10,17,19-28,30-37* is/are allowed.

6)☒ Claim(s) _____ is/are rejected.

7)☒ Claim(s) *32-35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3, 5-10, 17, 19-28, and 30-37 are pending. Claims 11-16 have been canceled. Applicant's arguments and amendments filed 2/28/06 have been entered.

Objections/Rejections Withdrawn

The following objections/rejections as set forth in the Office action mailed 10/20/05 have been withdrawn:

The objection to claims 2-6, 14, 18, 23, and because of minor informalities has been withdrawn.

The rejection of claims 1-8, 10, and 17-19 under 35 U.S.C. 102(b) as being anticipated by Manabe et al (US 4,219,433) has been withdrawn.

The rejection of claims 1-7, 10, and 37 under 35 U.S.C. 102(b) as being anticipated by WO 84/02146 has been withdrawn.

The rejection of claims 21-24, 26-31, 36, and 37 under 35 U.S.C. 103(a) as being unpatentable over Manabe et al (US 4,219,433) has been withdrawn.

The rejection of claim 36 under 35 U.S.C. 103(a) as being unpatentable over WO 84/02146 has been withdrawn.

The rejection of claims 1-6, 8, 10, 17, and 18 under 35 U.S.C. 102(e) as being anticipated by Naghshineh et al (US 6,492,308) has been withdrawn.

The rejection of claims 9, 20, and 25 under 35 U.S.C. 103(a) as being unpatentable over Naghshineh et al (US 6,492,308) as applied to claims 1-6, 8, 10, 17, 18, 21-23, 26-29, 31, 36, and 37 above, and further in view of Ilardi et al (US 5,466,389) has been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 7-10, 17, 19-28, 30, 31, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skee et al (US 5,989,353).

Skee et al teach micorelectronics wafer substrate surfaces are cleaned to remove metal contamination while maintaining wafer smoothness. See Abstract. The substrates are cleaned with an aqueous composition containing an alkaline components in an amount up to about 25% by weight, and a polyhydroxy compound. Additionally, the compositions may contain up to about 5% by weight of a metal complexing agent.

Suitable alkaline components include ammonium hydroxide, amines such as 3-methoxypropylamine, morpholine, etc. See column 5, lines 1-50. Suitable chelating agents include benzoic acid, etc. See column 6, lines 1-25. Note that, with respect to process claims 22, 23, and 36, the Examiner asserts that one of ordinary skill in the art would have been motivated to mix the ingredients in the order recited by the instant claims because Skee et al teach mixing the ingredients and it is obvious to mix in any order.

Skee et al do not teach with sufficient specificity, a composition or method of making a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teaching of Skee et al suggest a composition and method of making a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Skee et al (US 5,989,353) as applied to claims 1, 3, 7-10, 17, 19-28, 30, 31, and 36-39 above, and further in view of Skee (US 2002/0077259).

Skee et al is relied upon as set forth above. However, Skee et al do not teach the use of aminopropylmorpholine in addition to the other requisite components of the composition as recited by the instant claims.

'259 teaches an aqueous alkaline composition useful in the microelectronics industry for stripping or cleaning semiconductor wafer substrates. See Abstract. Suitable amines include 2-aminoethanol, 4-(3-aminopropyl)morpholine, etc. See para 39.

It would have been obvious to one of ordinary skill in the art, at time the invention was made, to use 4-(3-aminopropyl)morpholine in the composition taught by Skee et al, with a reasonable expectation of success, because '259 teaches the equivalence of 4-(3-aminopropyl)morpholine to 2-aminoethanol in a similar cleaning composition and further, Skee et al teach the use of 2-aminoethanol.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Skee et al (us 5,989,353) as applied to claims 1, 3, 7-10, 17, 19-28, 30, 31, and 36-39 above, and further in view of Seijo et al (US 2003/0181342).

Skee et al are relied upon as set forth above. However, Skee et al do not teach the use of 4-ethylmorpholine in addition to the other requisite components of the composition as recited by the instant claims.

Seijo et al teach a semi-aqueous cleaning formulation useful for removing particles from semiconductor wafer substrates. See Abstract. The composition may include buffering agents and suitable buffering agents include ethylmorpholine, TMAH, etc. See para. 35.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use ethylmorpholine in the composition taught by Skee et al, with a reasonable expectation of success, because Seijo et al teach the equivalence of ethylmorpholine to TMAH in a similar cleaning composition and further, Skee et al teach the use of TMAH.

Claim 1, 7, 10, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 020,042.

'042 teaches a non-petroleum based metal corrosion inhibitor in the form of a solution of compounds mixed together in particular proportions to form a non-petroleum based coating for preventing, or inhibiting, the oxidation of metals. The solution is prepared from aliphatic monobasic acids, aromatic acids, amines, and water, with or without a lubricant. See Abstract. Generally, the sequence of addition of the various components appears to be important to get a finished product which is clear, stable and which can be diluted to produce a stable product. The mixture of the acid component and lubricant are added to water with stirring in a suitable mixing device. This is ifollowed by the addition of the aminoalkylalkanolamine. See page 8, lines 1-15.

Specifically, '042 teaches a compositions containing 12-18% containing 60% tall oil fatty acids and 40% rosin; 2 to 4% 100 SSU petroleum oil, 5 to 10% of an amine mixture containing 10% morpholine, 10 to 20% benzoic acid, and 48 to 71% water. See page 16, lines 1-15. Additionally, other examples show the use of triethanolamine. See page 19, lines 5-15. Note that, with respect to instant claim 10, the Examiner asserts that the morpholine or triethanolamine and benzoic acid would react to form a stable

aminocarboxylate salt because simple mixing of the morpholine or triethanolamine and benzoic acid in water as taught by '042 et al would allow this reaction to inherently occur. '042 discloses the claimed invention with sufficient specificity to constitute anticipation.

Accordingly, the teaching of '042 anticipates the material limitations of the instant claims.

Claims 1, 8, 10, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Yarham et al (US 4,379,072).

Yarham et al teach a non-petroleum based metal corrosion inhibiting composition comprising 75 to 90% water, 2-8% linseed oil fatty acid, 1 to 10% C6-C12 dibasic acid and 3 to 8% of an amine blend containing morpholine and an alkanolamine such as triethanolamine, and 0.5 to 3% of a water-soluble alkali metal base. See Abstract. Suitable base materials include alkali metal hydroxide, carbonate or other basic alkali metal material. See column 2, lines 1-6. Specifically, Yarham et al teach a composition containing 84.8% water, 2% morpholine, 4% azelaic acid, 0.8% caprylic acid, 0.5% oleyl sarcosine, 3% monoethanolamine, and 4% linseed fatty acid. See column 2, lines 30-55. Note that, with respect to instant claim 10, the Examiner asserts that the triethanolamine or morpholine and caprylic (octanoic) acid would react to form a stable aminocarboxylate salt because simple mixing of the triethanolamine and octanoic acid in water as taught by Yarham et al would allow this reaction to inherently occur. Yarham et al disclose the claimed invention with sufficient specificity to constitute anticipation.

Accordingly, the teachings of Yarham anticipate the material limitations of the instant claims.

Claims 22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarham et al (US 4,379,072).

Yarham et al are relied upon as set forth above. Note that, with respect to process claims 22, 23, and 36, the Examiner asserts that one of ordinary skill in the art would have been motivated to mix the ingredients in the order recited by the instant claims because Yarham et al teach mixing the ingredients and it is obvious to mix in any order.

Yarham et al do not teach with sufficient specificity, a composition or method of making a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teaching of Yarham et al suggest a composition and method of making a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 7-10, 22, 24, 25, 26, and 32-37 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 and 22-29 of copending Application No. 10/832139 in view of EP 020042. Claims 1-17 and 22-29 of 10/832139 encompass all the material limitations of the instant claims except for the inclusion of an alkyl amine.

'042 is relied upon as set forth above.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use morpholine in the composition claimed by '139, with a reasonable expectation of success, because '042 teaches the use of mropholine in a similar corrosion inhibiting composition and further, '139 claims the use of amines in general.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition

in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because claims 1-17 and 22-29 of 10/832139 in combination with EP 020042 suggest a composition and method of making a composition using the specific steps containing water, an amine, carboxylic acid, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

With respect to the prior art rejections, Applicant states that none of the references of record teach or suggest the composition as recited by the instant claims. In response, note that, the Examiner asserts that '042 and Yarham et al teach compositions containing the same components in the same proportions as recited by the instant claims. Note that, each reference teaches morpholine which would fall within "alkyl amines" as recited by the instant claims. Additionally, a new ground of rejection has been set forth above which was necessitated by Applicant's amendment.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory R. Del Cotto
Primary Examiner
Art Unit 1751

GRD
May 15, 2006